1. Introduction
2. Outline of the presentation
3. Talk about the background and the importance of the project
4. Different types of diabetics and talk about why they have to have better methods of glucose detection
5. Talk about the current invasive glucose detection methods
6. Talk about non-invasive methods
7. Three different ways to perform glucose detection optically.
8. Absorption
9. Scattering
10. Polarization
11. The Problem we are trying to solve
12. SRE – Explain the Monte Carlo method. One special kind of Monte Carlo Simulation Method - SRE
13. What is special about the monte Carlo method, we trace the electric field upon each scattering event
14. The SRE can be described in matrix form where E is the electric field, S is the scattering matrix dependent on the scattering angle between the incoming propagation direction and outgoing propagation direction, R is the rotation matrix between the incoming and outgoing perpendicular electric fields.
15. Add an introduction to coherent backscattering enhancement We are interested in one special phenomena CBS Phenomena – Why CBS… Talk about it
16. Explain about coherent backscattering – from a turbulent medium - when light comes in from a laser, can take two different passes – forward and reverse – when they emerge they can constructively interfere with each other, intensity becomes larger
17. Use the figure to explain CBS – scatters when it hits, what the r’s are. Which is the scatterer. S’s are the path or rather the distance traveled between point of event of scattering and the next event. Or in the beginning entry to scatter and scatter to exit.
18. When the medium contains a glucose – and we overlay a magnetic field onto it, the light ray will experience a Faraday rotation due to the magnetic field – chiro molecule glucose - when light passes it will experience additional rotation of the electric field when propagating inside medium

The true Verdict constant is not clear since a study would have to be carried out

Faraday Rotation Angle for typical healthy person versus diabetic

1. Slide shows how we use EMC to describe CBS. Propagates through medium. N is a scatter, particles. Describe scatterers and what they are. When they exit they interfere which causes CBS

Purpose of the slide – Shows how glucose molecule – magnetic field will modify the light propagation in the medium. Presents glucose molecules, introduces Faraday in the medium. Light experiences Faraday in medium because of magnetic field and glucose in the medium.   
Delta is the angle of Faraday rotation – In our case half times VB\* d

Rotation R will have additional P rotation

1. Show changes in the formula with the previous equations
2. Shows the introduction of Faraday rotation in the code. Explain the function of the code
3. Explain the function of the code
4. Here is a small piece of my code, which shows how we calculate the P, to incorporate P \* R. Into the original R rotation.
5. x-axis is the angle of faraday rotation, y-axis enhancement factor, factor goes down, when the B field increased, or angle increased – able to figure out - fix figure
6. Difference between circular output and linear output
7. Circular output
8. Talk about the relationship between the simulation and a real life demonstration
9. Summarize the project: things that I have learned, achievement and results